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Opportunities to learn for children with Autism Spectrum Disorders: Effects of perceived efficacy of teacher practices and drivers of inclusion

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Abstract

One of the factors linked to the successful inclusion of children with ASD is the notion that the attitudes of teaching professionals are related to the perceived efficacy of educational practices. The aim of this study was to explore the relationships between the perceived efficacy of a set of practices specifically aimed at children with ASD and the perceived drivers and attitudes towards their full inclusion. We estimated a structural equation model that included socio-professional variables of the 454 teachers taking part in the study. The results show that greater efficacy of the practices implemented with children with ASD results in more positive attitudes towards the education of these children in inclusive settings. Similarly, drivers of inclusion also improve teachers' attitudes towards these children. The findings suggest the need to improve teacher training and provide teachers with the resources necessary to adapt their practices to all children.

Keywords: perceived efficacy; practices; drivers; ASD; structural equation model.

Responding to the educational needs of the diversity of children in schools is a complex challenge and more so if we take into account the variety of school settings and educational strategies that exist to attend to this diversity (Vakil et al., 2009). For this reason, Echeita (2008, p.12) used the statement "think globally, but act locally" to draw attention to the need to understand inclusion in the particular and specific context in which educational practices are implemented, but without forgetting that schools are part of a more general society with common dynamics. Schools are an ideal setting to consider the entire range of the diversity of student needs. In this context, and from an inclusive perspective, the hypothetical difficulties derived from the personal, social and cultural characteristics of children, become opportunities for all their members to improve and learn (Anglim et al., 2017; Fernández Batanero, 2015).

In the Spanish educational system, the Organic Law for the Improvement of Educational Quality (Official Bulletin of the State, 2013) highlights as one of its objectives the promotion of the maximum personal and professional development of all people. However, a part of the educational community considers that this law does not represent any significant advance in terms of the inclusion of students with different needs (Escudero, 2016). In this sense, the United Nations (UN) Organization recently expressed its concern about the limited progress achieved by the Spanish government regarding a more inclusive education (Europa Press, 2020). Specifically, the UN was concerned that a large number of students with disabilities (including children with ASD) would continue to be enrolled in Special Education centres. In the opinion of some leading authors, such as Verdugo et al. (2018), progress towards quality educational inclusion in Spain requires an important cultural change based on planning, incentives and continuous evaluation.

After many years of experiencing teaching that was insensitive to the differences among children, the idea of considering this traditional "one size fits all" for all students is

gradually being abandoned in order to embrace a scenario impregnated with a differentiated teaching. In line with the proposals of Leach and Duffy (2009) and Sansosti and Sansosti (2012), and putting it into practice for children with ASD, this differentiated teaching offers various means and modalities of learning that allow them to understand ideas and learn effectively. Structuring a classroom in which a "pedagogical differentiation" or "differentiated teaching" is practised requires taking three fundamental elements into account: global teaching for the whole class, group teaching, and individual teaching. Global and group teaching establishes a sense of general community for the whole class that encourages the exchange of different opinions. In addition, individualised education makes it possible to address the specific needs of each child that would otherwise be impossible to accommodate. Teaching styles and educational practice can therefore be established as crucial elements in addressing the needs of children with ASD.

Favourable Conditions or Incentives for an Inclusive School

The considerable efforts invested in improving schools have led to the conclusion that, just as certain beliefs and practices are not conducive to the inclusion of children with diversity, there are many other keys and incentives that support the principle of difference in schools and, therefore, the foundations of inclusive education. In this regard, many authors have compiled inventories of the conditioning factors underlying the foundations on which to build more inclusive schools (Kinsella, 2018). Bearing in mind the children of interest in this study, we present these particular keys or incentives in combination with the guidelines that Ainscow et al. (2012) drew up to facilitate inclusion in ordinary schools of the Spanish educational system. The first, *questioning attitudes*, would mean asking why a certain child with specific educational needs cannot be educated in the company of his or her peers in the same school (Jordan et al., 2009). The second, *inclusive leadership*, is considered vital, as it

is the element underlying all transformation and offers a minimum guarantee that the inclusion will be applied in a specific reality. In some recent research carried out in the Spanish educational context (Gómez-Hurtado et al., 2016), it is concluded with the importance of the leader of a school to manage the cultural diversity of the students among many other issues. The third, *respect*, refers to the understanding that in those places where inclusive education is successful, there is respect for each person's wish to learn and, in short, for human rights. The fourth is the promotion of *universal access to the curriculum*, which is understood as a flexible agent that is able to adapt to individual learning. The aim, therefore, is to achieve a harmonious coexistence between universal design for learning and differentiated teaching for each child. Moreover, the sense of *collaboration* and support among teachers also allows for an exchange that facilitates a combined teaching and organisational culture. This culture is thus born from the detection and selection of that which provides the best results (Fernández Batanero, 2015). If the teachers responsible for the inclusive schooling of a child with specific needs have sufficient support and accompaniment in those moments when they most need it, their predisposition to accept the child will improve (Burke & Sutherland, 2004). Finally, *determination* is established as an aspect of fundamental importance in every educational community. Teachers, administrators, families and even children should be willing to improve the teaching–learning processes generated in education systems. This determination is reflected in the search for different ways to teach children, in the willingness to work in a collaborative manner and on the creation of school contexts that pursue learning for all.

Links between Perceived Efficacy of Practices and Attitudes Towards Inclusion

Recently, a great deal of empirical evidence has been published on teacher-related variables, such as their attitudes, concerns and the perceived efficacy of their own practice

(Sharma & Sokal, 2016). In this regard, the results of different studies (Humphrey & Symes, 2013) have suggested that positive attitudes towards inclusion, especially in the case of children with specific needs, are associated with different teaching and environmental characteristics. More specifically, a relevant field of interest for the educational community is that addressing the relationships established between perceived efficacy of teaching practices and the attitudinal variables of teachers (Sharma & Sokal, 2016). Some studies carried out in the Spanish context (Cardona, 2009) have shown how teachers position themselves in favor of the inclusive approach but do not feel competent enough to manage their educational practices in inclusive classrooms. In this sense, Humphrey and Symes (2013) found that senior managers claimed to have greater perceived efficacy in handling students with ASD in inclusive classrooms than subject teachers. In general, the majority of the teachers surveyed were in favour of the educational and social inclusion of these children with autism. Moreover, the research by Sharma and Sokal (2016) revealed the relationships that exist between the attitudinal factor and the perceived efficacy of teaching practice. Thus, as the pre-service teachers had fewer concerns, they reported more positive attitudes towards the inclusion of students with different needs. Consequently, they were more confident about their own abilities to teach in inclusive classrooms.

The perceived efficacy of one's actions influences the organisation and regulation of people's behaviour (Bandura, 1997). In the educational field, the efficacy perceived by professionals refers to their belief that their teaching practices have the capacity to influence the learning and development of all children, including those with the most acute specific needs (Guskey & Passaro, 1994). As reflected in the results of the study by Woolfolk Hoy, Hoy and Davis (2009), teachers with high perceived efficacy of their educational activities are more committed to their teaching activity and to offering their help to those children who most need it. In turn, some scholars have related the perceived efficacy of teaching practices

to different parameters linked to the professionals themselves. Thus, according to authors such as Klassen and Chiu (2010), teaching experience is one of the variables that influence the perceived efficacy of educational practices. The professional role played in the school also seems to determine the efficacy that teachers perceive in their educational practice. In this regard, Buell et al. (1999) found that teachers in the field of special education expressed a greater sense of efficacy than those in regular education.

The efficacy perceived by teachers is positively related to the manifestation of positive attitudes (Savolainen et al., 2012; Yada & Savolainen, 2017). In fact, over two decades ago, Soodak and Podell (1993) surveyed a sample of teachers in the United States and found that those who perceived greater efficacy of their practices were more likely to position themselves in favour of the educational inclusion of children. A recent study in Japan (Yada & Savolainen, 2017) has shown that the perception of being capable of managing and controlling the disruptive behaviour of certain children is the variable that best predicts an attitudinal stance in favour of educational inclusion.

Considering this set of premises from the literature that link teachers' attitudes towards inclusion and the perceived efficacy of their educational practices, this research aims to answer the following questions:

1. Can teachers' attitudes towards the inclusion of children with ASD be predicted from the perceived efficacy of their practices specifically directed at these children?

2. Do the incentives perceived by teachers have a mediating effect on the relationship between perceived efficacy and attitudes of predisposition to inclusion?

3. Can the relationship between these variables (attitudes, perceived efficacy and incentives) be predicted by the sociodemographic variables of teachers related to their professional role, type of school, years of experience in training students with ASD, gender, age, and their academic qualifications?

The methodological approach used is based on Structural Equation Models. We chose this approach because it allows the relationships that exist between different variables to be explored with confirmatory analysis. Figure 1 shows a visual representation of these relationships.

(Insert Figure 1 here)

Method

Participants

The sample of participants in the study included teachers from ordinary schools in the Autonomous Community of Aragon (Spain). In the Spanish educational system, the expression "ordinary schools" refers to all those schools for children between 3 and 12 years old who do not have any permanent educational needs or serious disorders. Children with particular needs or serious disorders are generally enrolled in other special education schools. Generally, the psychologist of the ordinary schools elaborates the psychopedagogical evaluation document in which the best recommendation to school children with educational needs is indicated. If these professionals consider that it is better to school a particular child in a special education school, they communicate their decision to the family and the parents make the final decision about this schooling. In the event that the psychologist considers that it is better for the child to be schooled in an ordinary school, teachers must adapt their methodological strategies to respond to the needs of these children in the same classroom as the rest of their peers.

First, we contacted the office of the director of each school in the community. Through an initial email, we informed them of the intention and objectives of the study as well as the voluntary nature of taking part and confidentiality of any information provided. The same message also included a web link that allowed access to the questionnaire. After a

subsequent phase (lasting about four weeks) in which we telephoned the directors of the schools to ask them to encourage their teachers to answer the survey, we received a total of 454 valid questionnaires. It was not possible to calculate the specific response rate because no question was included in the questionnaire that referred to the name of the school in which each teacher worked. The data collection phase lasted approximately two months. Table 1 shows the personal and social variables of the sample of participants. The professional profiles of these teachers were three different: 1) General education teachers, 2) Special education teachers and Education Support Teams, 3) School administration.

(Insert Table 1 here)

Definition of Variables and Instrument

The questionnaire used in this study consisted of two different modules of questions. The first part asked participants about some socio-demographic and professional characteristics (see Table 1). In this first part six questions were included. The second part included fifteen items defining each of the constructs under analysis (see Table 2): the perceived efficacy of educational practices aimed at children with ASD, the perceived incentives for inclusion implemented by the educational centre and, finally, the attitudes towards the inclusion of these children. To draft the indicators of the questionnaire, a set of investigations were taken as a reference (Ainscow et al., 2012; Ferraioli and Harris, 2010; Kinsella, 2018; Savolainen et al., 2012; Yada & Savolainen, 2017) whose objective was focused on these constructs analyzed here.

After reviewing the literature on the subject, in this research we took the term *perceived efficacy* of these specific practices as describing the relative effect that the teacher attributed to such practice in order to successfully include children with ASD. In other words, it refers to how powerfully he or she valued that action to obtain positive results when it was

applied in a rigorous and correct way. According to authors such as Ruble et al. (2011), perceived self-efficacy seems to play a key role in ensuring successful implementation of practices based on empirical evidence. No additional explanation was included for each of the specific educational practices. A second variable was the *drivers perceived* by teachers for the inclusion of children with ASD. Different authors (Ainscow et al., 2012; Bunch, 2008) have defined "drivers for inclusion" as specific keys that can be both conceptual and physical and allow the creation of inclusive schools. These refer to values and beliefs that people have and to educational conditions that can bring about positive changes. Finally, the third latent variable of the research was the *positive view* of the inclusion of these children in ordinary schools. A total of three indicators define this variable.

In order to examine the completeness and clarity of the survey, the contributions of ten experts on the subject were considered. Five of them were university teachers in the Department of Educational Sciences and Psychology, and the other five were teachers in Infant and Primary Education schools. These experts had to assess the clarity in the wording of each indicator and whether they considered that these items were adequate to form part of the construct in which they were included (on a Likert-type scale of 0-5). After this process, we made some modifications to the questionnaire (we reduced the number of items and changed the wording of some of the statements). The approximate time to fill out the survey was eight minutes.

Data Analysis

The sequence of the analysis procedure began, first, with a descriptive and exploratory analysis of the observed indicators and latent variables. In this initial stage, we analysed the correlation coefficients and Cronbach's alpha. In a follow-up step, we tested the relationships shown in Figure 1 through a confirmatory factor analysis using the Structural

Equation Model with latent variables. To carry out the analyses we used The MPLUS software package (Muthén & Muthén, 1998-2007). As we could not consider the assumption of normality valid for these data, we adopted the method of maximum likelihood estimation, thus taking the "robust" covariance matrix as a basis (Satorra & Bentler, 1994).

We analysed a set of statistics and indices in order to assess the suitability and fit of the proposed models. For each of the models we indicate the robust χ^2 of Satorra-Bentler. At this point, we must remember that this statistic is influenced by the sample size and the model. This implies that the larger the sample or model is, the greater the chi-square value will be, which is more likely to be significant (Hu & Bentler, 1999). Specifically, we use the RMSEA, the SRMR and the CFI. Following Hu and Bentler (1999), we considered an RMSEA value in the range of 0.05 to 0.10 indicative of an appropriate fit. The values for the SRMR can vary from 0 to 1, although the models that fit best have values below .05. Even so, and as Hair et al. (2006) pointed out, a value as high as .08 could be considered within the limits of what is acceptable. Finally, a CFI value greater than or equal to .95 would evidence a good fit (Hooper et al., 2008). To assess each of the latent dimensions of the scale, we present as empirical evidence the reliability and convergent and discriminant validity. The standardised factor loads of the observed indicators are also considered evidence of the reliability of the variables. These factorial loads must be sufficiently large (.70) and statistically significant. As a result, their explained coefficients of variance should indicate a clear relationship with the underlying factor (or latent variable) (R^2 .50). We measured the precision of the latent variables considering the Composite Reliability Coefficient (CRC) and the Fornell and Larcker Coefficient (1981) (AVE). Thus, given a measurement model, the parameters for evaluating discriminant validity were the AVE and the estimation of the squared correlations between the latent variables. The recommended values for CRC and AVE are higher than .70 and .50 respectively (Bagozzi, 2010).

In this research work, we proposed that the relationship between the variables described should meet the following conditions: the perceived efficacy ('ESP') by teachers on specific practices designed to include children with ASD has a direct effect on the manifestation of a positive attitude towards their inclusion in ordinary schools ('ATT'). Moreover, this perceived efficacy in practice has an indirect effect on the positive attitude, channelled through the perception of favourable incentives ('DR') to include children with ASD. At the same time, this perception of the existence of incentives also influences positive attitudes towards the inclusion of these students.

Results

Table 2 shows the mean scores and standard deviations of the indicators of the perceived efficacy of educational practices aimed at responding to children with ASD, of the perceived drivers and of the favourable attitudes towards their inclusion. First, the mean of the total perceived efficacy scores, on a scale of 0 to 10 points, was above 5 (Total mean = 8.35). This is indicative of a certain confidence that teachers have in the specific practices they use with children with ASD. In addition, the mean level of the indicators of perceived drivers also exceeds the average score of 5 (Total mean = 8.99). Overall, the mean level of practice efficacy scores is slightly below the mean level of perceived incentives. The variability of indicators is similar in both dimensions. Furthermore, the attitude scale shows high scores for the two indicators that comprise it (Total mean = 8.7) and similar standard deviations. These indicators reflect favourable perceptions in favour of the inclusion of children with autism in schools.

Among the practices specifically aimed at children with ASD, the use of visual guidelines to support the management and organisation of information (M = 8.86, SD = 1.60) and the use of verbal reinforcement (M = 8.64, SD = 1.60) stand out for their greater

perceived efficacy. The practices perceived as less effective correspond to the application of incidental training and teaching (M = 7.51, SD = 2.07), and direct instruction in social skills (M = 8.21, SD = 1.93). Additionally, and although the set of scores for drivers is considerably high, other aspects that stand out as conditions perceived as more favourable for including children with autism are the creation of a generalised climate of belonging to the centre (M = 9.08, SD = 1.26) and of a classroom setting in which diversity is celebrated (M = 9.24, SD = 1.20). The incentives that received the lowest mean scores were the implementation of diversity measures framed in the common curriculum (M = 8.79, SD = 1.57) and the inclusive reception of children with ASD in schools (M = 8.91, SD = 2.22).

(Insert Table 2 here)

To test the dimensional structure of the constructs under study (perceived efficacy, drivers and attitude towards the inclusion of children with ASD), we defined a confirmatory factor analysis model that corresponded to the measurement model. In this model, we added a latent variable for each of the constructs studied. The statistics and suitability of the fit indices of this model, shown in Table 3, allowed us not to reject these structures and to verify the existence of reliability and convergent validity. Thus, the global model presented a fair fit ($\chi^2[87] = 222.13$, RMSEA = .06, SRMR = .05, CFI = .93). The factorial loads were statistically significant and greater than .65. For all latent variables, the explained coefficients of variance (R^2) were higher than .44 and the reliability coefficients exceeded the values considered appropriate (AVE > .50 and CRC > .70). We operationalised the dimension of the attitude towards the inclusion of children with ASD as a result variable, with three observable indicators. In this case, the factorial loads were also significant and the coefficients of variance explained exceeded the value of .44. Similarly, the reliability indices have proved to be adequate. This is the construct of attitude towards the inclusion of children with ASD.

(Insert Table 3 here)

Subsequently, we estimated a structural model with two latent variables (the perceived efficacy and the perceived drivers) and one latent outcome variable (attitudes towards inclusion of these children). In the final mediation model (Table 4), with the control variables included, we obtained reasonable goodness-of-fit statistics, which allowed us to conclude that the model fits (mediation model: $\chi^2[195] = 399.47$, RMSEA = .05, SRMR = .04, CFI = .92). First, we can see the positive and statistically significant effects of efficacy (0.13, *p* value < 0.05) and perceived drivers (.65, *p* value < .00) on the attitude towards the inclusion of students with ASD. These results support the fact that the greater the perceived efficacy of specific practices is, the more positive the attitudes of teachers will be about including children with ASD in regular schools. Simultaneously, we can observe that perceived efficacy also has a positive and significant effect on the drivers perceived by teachers (.55, *p* value < .00). There is also a positive and significant indirect effect of perceived efficacy on attitudes, through perceived drivers for inclusion (.33, *p* value < .00). The interpretation of these data allows us to conclude that the effect of perceived confidence in specific practices for children with ASD will increase if this confidence (or perceived efficacy) is accompanied by the perception of favourable drivers to include these children with autism.

According to the model for measuring the perceived efficacy of practices for children with ASD, some of the categories of the control variables show statistically significant differences. Thus, among the perceptions of teachers in public schools, we observed lower efficacy in terms of practices (-.12, *p* value < .00). Conversely, compared with teachers in general education and others belonging to the school administration (director or other person from the school administration), those in the field of Special Education and Educational Support Teams are the ones who reported the greatest perceived efficacy of their practices specifically aimed at ASD children (.21, *p* value < .00). Furthermore, having between 1 and

10 years' experience also led to the manifestation of a greater perceived efficacy in these practices (.16 and .12, *p* value < .10). Lastly, the categories of the variables of gender, age and qualifications did not reveal any significant differences in this model for measuring perceived efficacy.

We also found statistically significant differences in some of the categories of the control variables in terms of the model for measuring the attitude towards the inclusion of children with ASD. When compared with teachers who have no experience with such students, those who have between 1 and 5 years reported more positive attitudes (.10, *p* value < .10). Finally, having postgraduate or doctorate level qualifications also increased the likelihood of positive attitudes in favour of inclusion (.11, *p* value < .00).

(Insert Table 4 here)

Discussion

Key Findings

The results from this study show an association between the efficacy that teachers perceive about their classroom activity and the type of thoughts and feelings that they express towards the learning of children with ASD. This is also in line with the findings of other recent studies carried out in France, South Africa, Finland and the United States (Desombre et al., 2018; Savolainen et al., 2012; Tournaki & Samuels, 2016). It also explains why professionals with a low level of perceived efficacy of their educational practices will disagree with the idea that their pupils with ASD can learn in ordinary contexts. These results are borne out by evidence from studies such as Lifschitz and Glaubman (2002), who surveyed a sample of teachers from Israel. Their research concluded that, as the sense of perceived efficacy in handling the specific needs of a child or group of children increases (i.e. the more confident a teacher feels in his or her teaching process with these pupils), the more

willing he or she becomes to include them in the regular classroom.

The efficacy of teachers in their own practices varies according to different contexts and cultures (Morris et al., 2017; Tschannen-Moran & Woolfolk Hoy, 2001). For this reason, some scholars have proposed that perceived efficacy should be analysed in specific environments and teaching practices (Tschannen-Moran & Woolfolk Hoy, 2001). In fact, authors such as Savolainen et al. (2012) have highlighted significant differences between perceptions of teacher efficacy when referring to practices related to inclusive teaching. On the one hand, their sample of South African teachers rated their self-efficacy as an area of strength, whereas teachers in Finland reported feelings of low efficacy in the same regard. The study by de la Torre and Casanova (2005) involved a sample of active Spanish teachers and a sample of teachers in training and the results also showed differences. Specifically, active teachers were more confident about their own ability to manage the behaviour of students with different needs and to improve their academic performance. For their part, the pre-service teachers had greater confidence in being able to overcome obstacles derived from negative influences from the students' family environment. Other studies carried out with participants from the Spanish educational system (Doménech Betoret, 2006) have even linked teachers' high perceived efficacy to the improvement of psychological states such as stress, exhaustion and coping resources.

Moreover, the influence of different personal variables on the relationships between the perceived efficacy of professional practice and attitudes towards inclusion is consistent with previous studies. In this regard, in McCray and McHatton's (2011) work, mainstream education teachers in the primary and secondary stages of schooling expressed a clear lack of confidence in their professional skills in inclusive settings, as well as low perceived efficacy. However, Malinen et al. (2013) found that a similar pattern to attitudes occurred in the case of perceived efficacy. In this way, the experience that teachers had in caring for people with

specific needs could predict the perceived effectiveness of their practices. This pattern was repeated in the three samples of teachers from China, Finland and South Africa.

After that, and following the line of what Bandura (1997) presented, we could conclude that experiences of dominance were one of the main factors conditioning perceived efficacy. In contrast, Emam and Mohamed (2011) found no relationship between the degree of teacher training and experience and a more favourable perception of the self-efficacy of their inclusive education practices. However, relationships between the level of knowledge and professional experience and perceived efficacy in inclusive settings were found in another sample of teachers in Sweden (Engstrand & Roll-Pettersson, 2014). As a result of this disparity in results and effects, conclusions remain somewhat unclear.

Implications for Teacher Training

In general, and following the recommendations of certain authors (Majoko, 2016), the suggestion is to implement instruction specifically aimed at the needs of these children with ASD. This would expose them to authentic contexts of stimulating friendly relations and positive interactions with their peers within ordinary schooling environments. In this process, the preparation of teachers (especially those in the field of general education) plays a fundamental role, as it has become evident how these professionals report a lack of training to meet the multiple and varied educational needs of these children in inclusive settings (McCray & McHatton, 2011). Therefore, according to Siu and Ho (2010), specific training in strategies and practices of working with children with ASD could lead to improved teacher self-efficacy as regards their teaching–learning process. The teacher is a key element in any programme of work with pupils with specific needs carried out in ordinary school settings. We should remember that a positive attitudinal stance towards school inclusion is one of the factors guaranteeing the successful implementation of quality inclusive education in schools (Engstrand & Roll-Pettersson, 2014).

Research Limitations and Prospects

One of the most relevant limitations of this study involves the method used to measure perceived efficacy regarding the specific practices for pupils with ASD. This efficacy is translated into a specific judgement that, at a given time, a teacher makes about a specific educational practice. Moreover, the sample of teachers involved in this study was taken from a particular Autonomous Community in Spain. Hence, and inasmuch as inclusive actions are applicable across the entire Spanish educational system, the need arises for future research to have a representative sample of the country that will even allow comparisons to be made at the international level. Moreover, the absence of observational data collected in the real context of the classrooms of the Spanish educational system does not allow us to interpret the results of this study in a totally objective way. Therefore, our findings are just a preliminary approach to the study of the practices used in the classrooms and the efficacy that teachers perceive of these strategies to include students with ASD and their beliefs. An interesting future line of research could be linked to the study of the factors causing the origin of the beliefs of efficacy. In fact, according to Ruble et al. (2011), this understanding of the origin of teachers' feelings of self-efficacy regarding the teaching of students with different needs, such as children with ASD, would be a prelude to the identification of those factors and areas that should be the focus of professional development initiatives and support for education professionals.

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Tables

Table 1. Sociodemographic characteristics in the sample (N=454)

Variables	N	% of the sample
Type of school		
Private	71	15.6
Public	383	84.4
Professional role		
General education teacher	221	48.7
Special Education Teacher and Educational Support Teams.	135	29.7
School administration	98	21.6
Experience with pupils with ASD		
I do not have experience	124	27.3
Between 1-5 years	239	52.6
Between 6-10 years	52	11.4
More than 10 years	39	8.7
Gender		

Men	84	18.5
Women	370	81.5
Age		
Between 22-30 years	50	11.0
Between 31-45 years	205	45.1
Between 46-65 years	199	43.9
Academic studies		
Bachelor's Degree (3-year university degree)	266	58.6
University Degree (4/5-year university degree)	141	31.1
Postgraduate/Doctorate	47	10.4
Total	**454**	**100**

Table 2. Descriptive statistics: Perceived efficacy, drivers and attitude

		Mean	SD
	Efficacy of specific practices		
ESP1	*Apply incidental teaching.*	7.51	2.07
ESP2	*Use visual guidelines to help children manage information.*	8.86	1.60
ESP3	*Reduce uncertainty in learning.*	8.44	1.76
ESP4	*Use guided game strategies.*	8.34	1.69
ESP5	*Use direct instruction in social skills.*	8.21	1.93
ESP6	*Follow positive behavioural support for problem behaviors.*	8.42	1.69

ESP7	*Use verbal reinforcement.*	8.64	1.60
	Drivers		
DR1	*Inclusively to accommodate children with ASD in the schools.*	8.91	2.22
DR2	*The support that the management team offers to the teaching staff.*	8.97	1.40
DR3	*The measures of attention to diversity within the curriculum.*	8.79	1.57
DR4	*Create a widespread school membership climate.*	9.08	1.26
DR5	*Create a classroom climate in which diversity is celebrated.*	9.24	1.20
	Attitude in favour of inclusion		
ATT1	*Engaging all members of the educational community encourages inclusive teaching for children with ASD.*	9.37	1.02
ATT2	*Incorporating children with ASD to an ordinary school is a great development opportunity for all.*	8.66	1.79
ATT3	*The fact of considering the specific needs of these children as barriers to their learning and participation, should be rejected.*	8.74	1.89

Scale from 0 to 10.

Table 3. Measurement Model of Perceived Efficacy, Drivers and Attitude

	ESP	R^2	DR	R^2	ATT	R^2	ESP	DR	ATT
ESP1	.66	.44							
ESP2	.71	.50							
ESP3	.68	.46							
ESP4	.84	.71							
ESP5	.82	.67							
ESP6	.85	.72							
ESP7	.73	.53							
DR1			.70	.49					
DR2			.65	.42					
DR3			.72	.52					
DR4			.87	.77					
DR5			.85	.72					
ATT1					.66	.44			
ATT2					.78	.61			
ATT3					.73	.53			
ESP							1.00		
DR							.22	1.00	
ATT							.23	.51	1.00
α	.90		.87		.74				
CRC	.76		.76		.72				
AVE	.58		.58		.52				

χ^2 [87]=222.13 RMSEA=.06 CFI=.93 SRMR=.05

Table 4. Results of the Structural Model

	Model_1			*Model_2*			*Model_3*			*Model_4*		
	SP-Ef	***Dr***	***Attitude***	***SP-Ef***	***Dr***	***Att***	***SP-Ef***	***Dr***	***Att***	***SP-Ef***	***Dr***	***Att***
DIRECT EFFECTS												
Type of school												
Public	-.12***	.02	-.08**	-.12***	.02	-.07*	.12***	.01	-.05	-.12***	.01	-.05
Professional role												
Special/Support Teams				.22***	.04	.08*	.21***	.04	.07	.21***	.04	.07
School administration				.04	.03	-.03	.06	.04	-.02	.06	.04	-.02
Experience with TEA												
Between 1-5 years				.17**	-.03	.09*	.16*	-.04	.10*	.16*	-.04	.10*
Between 6-10 years				.13**	.01	.06	.12*	.00	.07	.12*	.00	.07
More than 10 years				.04	.01	.05	.05	-.01	.07	.05	-.01	.07
Gender												
Women							.04	.07	.01	.04	.07	.01

Age												
Between 31-45 years							.11	.02	-.06	.11	.02	-.06
Between 46-65 years							-.04	-.04	-.07	-.04	-.04	-.07
Academic studies												
University Degree							.01	-.02	.01	.01	-.02	.01
Postgraduate/Doctorate							.05	-.03	.11***	.05	-.03	.11***
SP-Efficacy											.55***	.13**
Drivers												.65***
INDIRECT EFFECTS												
SP-Efficacy												.35***
R^2	.015	.31	.58	.10	.31	.60	.12	.32	.62	.12	.32	.62
Goodness of Fit:	χ^2 [99]=242.17 RMSEA=.06 CFI=.93 SRMR=.04			χ^2 [159]=345.77 RMSEA=.05 CFI=.92 SRMR=.04			χ^2 [219]=433.73 RMSEA=.05 CFI=.92 SRMR=.04			χ^2 [195]=399.47 RMSEA=.05 CFI=.92 SRMR=.04		

Figure 1. Study approach